Collect Bike Data

Transportation Planning Branch		Approved: July 23, 2007 Version 1

[Contents]

Purpose

The purpose of this procedure is to describe how TPB engineers collect the bicycle data necessary to complete Comprehensive Transportation Plans (CTPs).

Background

Comprehensive Transportation Plans are multi-modal plans, and one of the travel modes considered in the plan analysis is bicycling. Historically, bicycle facility planning has been the responsibility of the NCDOT Division of Bicycle and Pedestrian Transportation (DBPT). Now, the multi-modal element of CTPs has made it necessary for data on bicycle facilities to be collected during the long-range planning process. This information exists in many forms, including (but not limited to) state bicycle route maps, pavement management spreadsheets, aerial photographs, greenway and off-road trail plans/maps, and state or local bicycle facility plans.

Responsibility

The TPB engineer who is working on a CTP is responsible for contacting state and local data sources, or personally collecting the necessary bicycle data.

Policy, Regulatory, and Legal Requirements

NC General Statute 136-66.2 states, “In the development of the [CTP], consideration shall be given to all transportation modes including, but not limited to, the street system, transit alternatives, bicycle, pedestrian, and operating strategies.”

In addition, Section 1107 (Metropolitan Planning) and Section 6001 (Transportation Planning) of Public Law 109-59 (SAFETEA-LU) require the consideration of multi-modal transportation in metropolitan and statewide long-range planning.

Scheduling and Time Constraints

This procedure does not have any set time constraints, other than any deadlines determined by the Planning Group Supervisor for the development of the CTP. It may take some time to receive any information requested from other sources (including the DBPT), and local planning agencies), so any schedule should take this into account. If it will be necessary to manually collect data (either in the field or using aerial photos), this may take considerably longer than if the data already exist.

Procedures

Inputs – Bicycle routes, maps, or plans within the assigned CTP study area.

Output – A map of bicycle facilities with an updated attribute table.

When assigned a CTP study area, the TPB engineer follows the steps outlined below to collect the necessary bicycle data.

Step	Action
1	The TPB engineer will determine whether existing bicycle routes and maps are available within the assigned CTP study area. The following information should be researched and collected (separately or concurrently): • Find out if there are any signed bicycle routes within the assigned CTP area. These signed routes are developed by the NCDOT DBPT, and are classified as either statewide routes (such as the "Mountains to Sea" route) or as county/municipal routes. To determine whether an area has any statewide or county/municipal-signed routes, go to the DBPT web site under the heading "Maps". Statewide routes are listed under the heading "NC Bicycling Highways Maps"; counties or municipalities with signed routes are listed under "Regional and Local Maps" or "Urban Maps." • The statewide bicycle routes that have been designated by the Bicycle and Pedestrian Division need to be reviewed by the TPB project engineer to determine if any of these routes are near the CTP study area. If so, the engineer should contact the Bicycle and Pedestrian Division to determine the specific routing within the study area. (If the CTP study area that has a county or municipal bicycle route map, the statewide routes are usually shown on these maps). Any roadway that is included as part of a signed route should be considered for bicycle improvements, and must therefore have bicycle road attribute data collected. • If the CTP study area has a local map (county or municipal bicycle maps), they can be downloaded from the above web site or a paper copy of the map may be requested from the DBPT. These maps will show routes that have been determined by NCDOT and the local area to be particularly suited to bicycling (this can be very helpful in determining the need for bicycle facility improvements as part of the CTP). Any roadway that is included as part of a signed route should be considered for bicycle improvements, and must therefore have bicycle road attribute data collected. • A shapefile can be download from the NCDOT GIS web site. Bike routes include the Interstate, State, County, Regional, and Urban routes and are based on the DOTRoads file, produced by NCDOT. The engineer can use this shapefile as a starting point for the Bicycle CTP map.

2	The TPB engineer should next determine whether the local area being studied has a bicycle plan developed as part of the DBPT's Planning Grant program. (Only municipalities, not counties, are currently eligible for this program.) A list of the areas that have completed these plans can be found on the DBPT web site under the heading "Bicycle and Pedestrian Planning Grant Initiative." • In any area that has one of these plans, it should serve as the baseline for bicycle recommendations in the CTP. A copy of completed plans will be provided to each of the TPB Planning Groups once the DBPT has approved them. • If a bicycle plan is currently underway in the CTP study area, the TPB engineer should contact the local government that is doing the plan to find out the schedule for completion. (This may help determine the schedule for the development of the CTP.)
3	The TPB engineer should contact the local planning department(s) and the RPO or MPO in the CTP study area to find out if any local bicycle plans have been developed outside the state's planning grant program. These plans can also be used to help identify potential bicycle needs.
4	The TPB engineer needs to determine if there are any pedestrian or greenway plans that have been developed for the CTP study area. Often, greenways and multi-use paths that are intended to serve bicycle travel might be shown in the pedestrian plan or greenway plan. These plans might be developed as part of the state's planning grant program, developed by a local government, or developed by an RPO or MPO. Check the web site noted in Step 2 to determine if there are any pedestrian plans available through the planning grant program (contact the local government, RPO, or MPO to find out if these agencies have any applicable plans). [For additional information, refer to "Collect Pedestrian Data" procedure]
5	Once any applicable plans are collected, the TPB engineer must determine which roads in the study area correspond with signed or mapped routes, or with improvements recommended in the bicycle plans. These roads, **in addition to** the roads being studied as part of the CTP highway element, will need specific road attribute data collected and verified. The necessary data includes the following: • number and width of travel lanes on roadway, • presence of paved shoulders or bicycle lanes, • posted speed limit, and • traffic volumes Most of this information was collected as part of the highway element data collection process, but any missing data will need to be obtained. The best source for the lane and shoulder data is the Pavement Management Unit web site under the link for "PCS File Download." Speed limit information can be obtained from the Traffic Engineering & Safety Systems Branch or Division/Regional Traffic Engineers, and traffic volumes can be obtained from traffic survey maps.
6	The TPB engineer will use all the data and plans collected in the steps above to analyze the bicycle needs within the community being studied. (Output will be a map of bicycle facilities with an updated attribute table.)

Warnings and Precautions

Because bicycle planning is a new procedure within the Transportation Planning Branch (TPB), the procedure steps outlined in this document may change over time. These procedure steps have been intentionally written with a degree of flexibility so that the specific needs of each CTP study area can be met.

Resources and Tools

ArcView software – maps (used internally by TPB)

NCDOT Division of Bicycles and Pedestrian Transportation web site

NCDOT GIS web site

Contacts

- For suggestions to change this procedure contact: Earlene Thomas (919) 733-4705 ext. 31
- For questions about performing this procedure contact: Dan Thomas (919) 715-5482 ext. 389

Glossary

Comprehensive Transportation Plans (CTPs)

Division of Bicycle and Pedestrian Transportation (DBPT)

User Access

Restricted NCDOT, FHWA, MPO, RPO, Consultants, etc.

Flowchart

None